

Claims

1. A process for providing a security document, in particular a banknote, with a coloured marking, comprising providing a photosensitive preparation on a portion of said document and submitting at least selected areas of said portion to a light beam, characterised in that said preparation is capable of forming a film on said portion and comprises a substance capable of producing colloidal metal or semiconducting particles under the effect of UV irradiation, and in that said areas are irradiated by means of an UV-light beam so as to produce said colloidal particles.

2. A process as claimed in claim 1, wherein said preparation is an ink or varnish, is substantially transparent before said irradiation and comprises a film forming polymer and a precursor of colloidal metal or semiconducting particles.

3. A process as claimed in claim 2, wherein said precursor is a precursor of Au, Ag or Cu colloidal particles.

4. A process as claimed in claim 1, 2 or 3, wherein said film forming polymer is a polysaccharide or polypeptide and said precursor is an inorganic gold salt or acid.

5. A process as claimed in claim 4, wherein said film forming polymer is chitosan and said precursor is a chloroauric acid.

6. A process as claimed in anyone of claims 1 to 5, comprising the steps of

a) applying a chitosan solution onto said portion of said security paper and

b) drying said portion, so as to form a film having a thickness of between 0.5 and 20 µm

c) applying a solution of chloroauric acid to said portion, and

d) drying said portion in the dark

7. A process as claimed in anyone of claims 1 to 5, comprising the steps of

a') combining a chitosan solution and a chloroauric acid solution in a molar ratio HAuCl<sub>4</sub> / chitosan monomeric unit of between 0.1 and 1

b') applying said combined solution onto said portion of said security paper and

c') drying said portion in the dark

d') eventually repeating steps b' and c' so as to form a film having a thickness of between 0.5 and 20 µm, in particular of between 2 and 10 µm.

8. A process as claimed in any one of the preceding claims, wherein said irradiation is performed by means of a pulsed excimer laser.

9. A process as claimed in anyone of claims 1 to 7, wherein said irradiation is performed by means of a frequency-multiplied solid state Laser.

10. A process as claimed in anyone of the preceding claims, wherein the irradiation is performed by a beam deflection method via a plurality of mirrors.

11. A process as claimed in claim 10, wherein said irradiation is performed via a system of a beam scanning system, in particular piloted galvanometric mirrors.

12. A process as claimed in anyone of the preceding claims, wherein a diffractive network is reported into said film.

13. A process as claimed in anyone of the preceding claims, wherein a covering layer is applied onto said film after said irradiation, said covering layer having a high

- 15 -

absorption in the UV range and being substantially transparent in the visible light region.

14. A process as claimed in anyone of the preceding claims, comprising a reticulating step after development of said marking.

15. A process as claimed in any one of claims 10-14 providing an identity marking to said security document.

16. A security document, in particular a banknote, bearing a marking obtained by a process as claimed in anyone of the preceding claims.

17. A security document, in particular a banknote, bearing an identity marking obtained by a process as claimed in any one of claims 1-15, wherein the amount of photosensitive preparation per surface unit provided to said document is smaller than the amount that is necessary to produce a metallic mirror aspect.